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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/586,977

07/02/2007

Thomas W. Jenner JR.

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SEED INTELLECTUAL PROPERTY LAW GROUP PLLC
701 FIFTH AVE
SUITE 5400
SEATTLE, WA 98104

EXAMINER

LUO, DAVID S

ART UNIT

PAPER NUMBER

2837

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/586,977	Applicant(s) JENNER, THOMAS W.	
	Examiner DAVID S. LUO	Art Unit 2837	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11/13/2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 July 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>07/02/2007</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. In view of applicant's remarks filed on 11/13/2008, the Examiner acknowledges that Applicant elected claims 1-8 for examination.
2. The non-elected claims 18-39 must be cancelled (not withdrawn) in response to this Office action.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-8 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

As to claim 1, the phase "a sine-variable rectangular wave signal" was not described in the specification in such a way as to enable one skilled in the art to make and/or use the invention. Detailed description of the phase in the specification is required in response to the Office action.

As to claims 2-8, they are rejected as they are dependent on claim 1.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 7,164,967 to Etienne-Cummings, and further in view of U.S. Patent No. 4,047,114 to Lane.

As to claim 1, Etienne-Cummings teaches a control circuit for an actuator (Etienne-Cummings figs. 1 - 3 and figs. 7A - 9) comprising: an analog central pattern generator circuit (Etienne-Cummings figs. 1 - 3 & figs. 7A - 9 and col. 6: lines 42 - col. 11: lines 63 where a method is taught to use the Central Pattern Generator [CPG] chip/circuit to implement a robotic controller for walking, swimming, flying, hopping, etc.) structured to generate a sine wave control signal at an output (Etienne-Cummings col. 5: lines 60-61 "a continuous waveform provided by a CPG" and fig. 5: "HIP" where the continuous waveform is displayed as similar to the sine waveform). Etienne-Cummings teaches a method to drive the actuator (robot) in a continuous waveform movement pattern (Etienne-Cummings fig. 7B: "91", "100") in response to the control signal (Etienne-Cummings fig. 7B: "60 - sensors" from the central pattern generator (Etienne-Cummings fig. 7B: "70", "80", "90"). Etienne-Cummings does not teach an analog multi-vibrator circuit structured to generate a sine-variable rectangular wave signal. Lane teaches an analog multi-vibrator circuit (Lane fig. 1: "18") structured to generate a sine-variable rectangular wave signal (Lane fig. 1 where the input signal is the sine waveform and output waveform is the frequency variable rectangular wave).

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Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to implement the teachings of Lane into Etienne-Cummings since Etienne-Cummings suggests different waveforms of movement for a robot (Etienne-Cummings fig. 6) and Lane suggests a detector circuit which responds to sinusoidal or square wave input signals to detect the presence of a particular frequency or band of frequencies for monitoring and controlling purpose in the analogous art of electrical signal processing and control.

Allowable Subject Matter

7. Claims 2-8 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 1st paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David S. Luo whose telephone number is (571)270-5251. The examiner can normally be reached on M-F 9AM-6PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Benson can be reached on (571)272-2227. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from

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either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

David Luo
Art Unit 2837

/BENTSU RO/
Primary Examiner, Art Unit 2837